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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,533

09/24/2003

Jeffrey A. Lucas

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04/28/2006

3M INNOVATIVE PROPERTIES COMPANY

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EXAMINER

CECIL, TERRY K

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/669,533

Applicant(s)

LUCAS ET AL.

Examiner

Mr. Terry K. Cecil

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17; and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17; and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date two.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following: The use of the trademark "TEFLON" has been noted in this application. When a trademark/name appears in the specification, it should appear with each letter capitalized and be followed (i.e. at least once in its entirety) by the recognized components of the product/material from that trade source at the time that it is being referenced. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the following reasons:

- Claim 5 is indefinite because of the presence of a Trademark, i.e. TEFLON. If the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. See also 608.01(v), 2173.05(u) in the MPEP.

***Claim Rejections - 35 USC § 103***

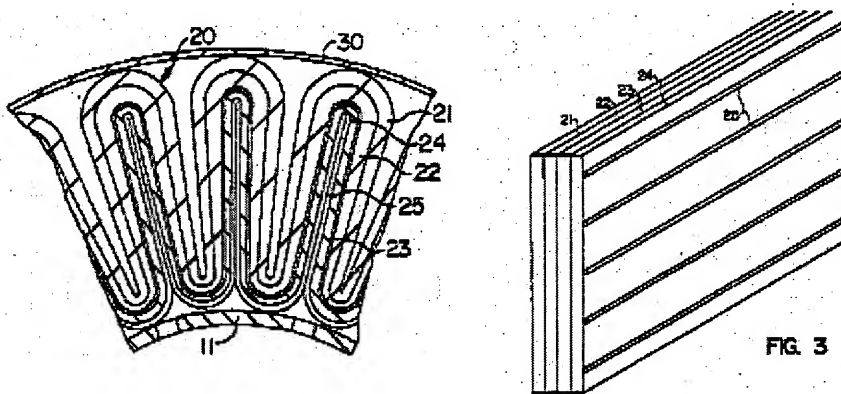
4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-4, 6-7, 9-14, 16-17, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (U.S. 5,552,048) in view of Rasmussen (U.S. 3,954,933).

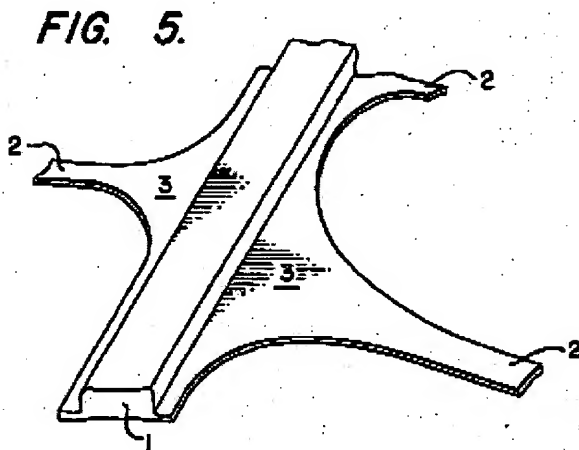


Miller teaches a filter element including a filter media 23, an upstream support 21 and a multi-layer downstream support 22 and 24 (note that the cushioning layer can be between the filter layer and either of the upstream and downstream supports, see col. 4, lines 17-21). The second downstream support layer 24 includes "ribs" 25 [as in claims 1, 6, 12, 13 and 22]. The cushioning layer (or first downstream support, see col. 8, lines 42-45) is a thin, highly porous,

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nonwoven, polyester layer made by a wetlaid process (col. 5, lines 29-46) [as in claims 7, 9-10, 14 and 16-17]. The examiner considers such a layer made by the same process and material disclosed by the applicant and having a thickness less than 100 microns yet being highly porous as having its surface contact points "minimized". As shown in e.g. figures 1 and 6, the filter element includes a perforated core, an outer cage and end caps [as in claims 13 and 20-21]. The filter media is pleated to have longitudinally-extending, radial pleats [as in claims 2-3].

Although Miller teaches his second downstream support can be *any* woven or nonwoven material (col. 4, lines 39-40) and cites an extruded, apertured, polymeric, mesh having "ribs" 25 as an example, he doesn't mention the layer being an extruded apertured film. However, such is taught by Rasmussen (U.S. 3,954,933). As shown in figure 5 below and also figures 2-3,



Rasmussen teaches a layer comprising an extruded, apertured, polymeric film having ribs 1 and portions 2, 3 between apertures [as in claims 1, 11, 13, and 22]. It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have at least the

second downstream support layer of Miller to be the film layer of Rasmussen, since Rasmussen teaches the benefits of a reinforcement that is thin, strong, and inexpensive and that *can be used in filters* (col. 1, lines 8-13).

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As for claim 4, Miller teaches the filter media can be in the form of a membrane (col. 5, line 52).

He also teaches that the membrane can be *any pore size* (col. 5, lines 58-59) but does not

specifically teach a microporous membrane having a pore size of about 0.1 to about 10 microns.

However, such would have been obvious to the skilled man depending upon the nature of the

fluid being filtered, the nature and size of the contaminants in the fluid, and the acceptable

pressure drop across the filter element—as taught by Miller (col. 5, lines 47-50).

6. Claims 5, 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Miller in view of Kawano et al. (U.S. 6,808,553). These claims add the limitations of a filter media of Teflon (PTFE), among others and the nonwoven support layer being laminated to the media. Kawano teaches a polyester, nonwoven, support layer laminated to a PTFE filter media (col. 1, lines 32-33; col. 4, lines 30-44). It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have the first downstream support layer of Miller to be laminated a PTFE filter media, since Kawano teaches the benefit of such a laminate exhibiting a high collection efficiency compared with a glass fiber medium under the same pressure loss (col. 1, lines 32-35).

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7. In view of the appeal brief filed on 2-17-2006, PROSECUTION IS HEREBY REOPENED. The new ground of rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

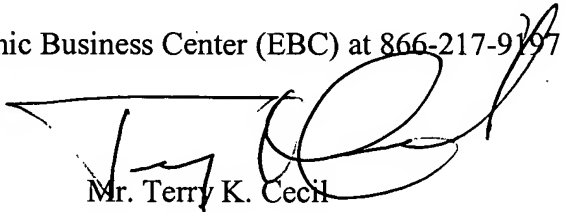


**STEVEN P. GRIFFIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1700**

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8. Contact Information:

- Examiner Mr. Terry K. Cecil can be reached at (571) 272-1138 at the Carlisle campus in Alexandria, Virginia for any inquiries concerning this communication or earlier communications from the examiner. Note that the examiner is on the increased flextime schedule but can normally be found in the office during the hours of 8:30a to 4:30p, on at least four days during the week M-F.
- Wanda Walker, the examiner's supervisor, can be reached at (571) 272-1151 if attempts to reach the examiner are unsuccessful.
- The Fax number for this art unit for official faxes is (571) 273-8300.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mr. Terry K. Cecil  
Primary Examiner  
Art Unit 1723

TKC  
April 26, 2006